



NOVITATES ZOOLOGICAE

Vol. XXXVI.

SEPTEMBER 1931.

No. 3.

ANTHRIBIDAE VERSUS PLATYSTOMIDAE.

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IN a paper recently published in the *Proc. of the U.S. National Museum*, vol. 77, Art. 17, Mr. W. Dwight Pierce classifies the North American *Anthribidae* under the name of *Platystomidae* (Mr. Pierce makes the family a superfamily, which does not affect the nomenclatural question) and states that the name *Anthribidae* has to be transferred to the family hitherto called *Nitidulidae*. If Mr. Pierce were right, *Meligethes* would become an Anthribid and *Araecerus* a Platystomid. Is this upsetting of nomenclature justified by the evidence and arguments Mr. W. D. Pierce brings forward?

The reproach has been addressed to the International Commission on Zoological Nomenclature that the Commissioners, in rendering an opinion, depend too much on the evidence presented by the person who brings a case before the Commission, the evidence being sometimes incomplete or even inaccurate; a serious censure. In order to be as much as possible on the safe side, the Commission has adopted the practice of submitting any special question to the authors working at the particular group in which the case has arisen. If Mr. W. D. Pierce had followed this sound procedure, he would have been saved from falling into the error of basing his conclusions on an incomplete and partly inaccurate statement of the case and from arriving at a result not warranted by Rules of Nomenclature and common sense. I am, of course, writing this protest as a Coleopterist interested in *Anthribidae*, not as a member of the Commission on Zoological Nomenclature. When I took up this family of rhynchophorous beetles as a side-line in 1893, I accepted the family name *Anthribidae* because the authors who had dealt with the family on a broad basis had adopted that name: Schoenherr, Jekel, Pascoe, Lacordaire, etc. I confess that I was wrong in neglecting to inquire into the history of the name more closely, and therefore feel grateful to Mr. W. D. Pierce for the opportunity he gives me to examine with him the past history of the name *Anthribus* from which the designation *Anthribidae* is derived. Let us then look at Mr. W. D. Pierce's statements and at the literature relative to the case of *Anthribus* versus *Platystomos*.

"The oldest valid name in the superfamily is *Platystomos* (Hellwig) Schneider (1791)," says Mr. W. D. Pierce, "and hence it gives its name to the family in which it is to be placed and also to the superfamily." . . . This statement sounds dictatorial, but is only meant as a summary of what follows on the next page. It refers, however, to a rule which the Code of Rules of Zoological Nomenclature does not recognize, namely, that the family names must be derived from the oldest included valid generic name. Some Entomologists have lately adopted such a rule,

and in consequence have managed to replace old family names by new ones ; but it is hardly likely that any committee with a sense of responsibility will countenance a rule which creates chaos. We have been given to understand that the Code of Rules of Zoological Nomenclature is paramount in the United States of America, and that its provisions can be enforced in the public institutes. The present case, therefore, is of some interest from that point of view. Disciplinary pressure, however, is not to be recommended in science. There should be freedom, though freedom tempered by self-restraint. One can approach questions of Nomenclature with a disregard of the rules adopted by the majority ; but if one claims for oneself this liberation from the shackles of a Code, one must in justice concede to the majority the right to ignore in the same way one's own rules. We will, therefore, pass on, and in doing so will only remark that the quotation of *Platystomos* should read *Platystomos* Hellwig (1792), not as above.

On p. 2 Mr. Pierce continues :

"The group so long known as Anthribidae involves some difficult nomenclatorial problems.

"After a thorough search of the literature I have found the following history applying to the nomenclature of the families :

"*Anthribus* Geoffroy, 1762, *Hist. Abr. des Ins.*, vol. 1, pp. 306-309.

"Only one species satisfies the binomial requirement. Species No. 4 is definitely referred to Linnaeus, *Fauna Suecica* (first edition), No. 370, which is *Dermestes pulicarius*. This work is pre-Linnean (1746), but its second edition appeared in 1761, and furthermore the *Systema Naturae*, tenth edition (1758), also contains this species. In the twelfth edition (1767), p. 574, Linnaeus refers this species to *Silpha* and quotes *Anthribus* 4 Geoffroy as a synonym. Bradh (1769) cites *Anthribus* as equal to *Silpha*. The obvious conclusion is that *pulicarius* must become type of *Anthribus* and the genus must pass out of the Rhynehophora.

"Hence *Anthribus* Geoffroy, 1762, with *pulicarius* Linnaeus as type, takes the place of *Brachypterolus* Grouvelle (1913), the subfamily Anthribinae takes the place of Cateretinae, and family Anthribidae of Nitidulidae."

These passages contain a number of different points which it is necessary to discuss seriatim :

(a) "Only one species satisfies the binomial requirement." . . . It is evident that Mr. W. D. Pierce considers as valid the names of only those authors who employ names for species as well as for genera, an interesting opinion in view of the discussion which took place at the Zoological Congress at Padova last year when all the Americans present at the meeting of the Section opposed this opinion. Considering that Geoffroy does nowhere employ a name for a species in 1762, Mr. W. D. Pierce ought to have rejected him as non-binomial, if the expression "binomial requirement" has any meaning. Although Geoffroy, in *Hist. Abr.*, 1762, praises the work of Linnaeus and quotes the tenth edition of *Systema Naturae*, he carefully avoids applying the binary method of naming in which the tenth edition differs¹ from former editions of the *Systema Naturae* and from the *Fauna Suecica* of 1746. For him a name stands for a genus, and a differentia (or diagnosis) for a species ; that was the system of nomenclature then in vogue : "A l'aide d'un ordre méthodique . . . on pourra trouver le nom & l'espèce d'un insecte inconnu auparavant," says Geoffroy, i.e. p. xii.

¹ i.e. in the consistent application of the binary principle in nomenclature.

He still looked upon all the so-called species as intergrading from man to the minerals and plants and therefore not requiring names.

(b) "Species No. 4 is definitely referred to Linnaeus, Fauna Suecica (first edition), No. 370, which is *Dermestes pulicarius*." . . . I have read this sentence and those following it (quoted above) again and again in order to find out the guiding principle that led Mr. W. D. Pierce to say that "the obvious conclusion is that *pulicarius* must become type of *Anthrribus*." I am still at a loss. At first I thought that Mr. W. D. Pierce wished to emphasize the opinion that, if there is anything in an original description of a genus which points definitely to one of the included species, this fact must be taken into account in the subsequent selection of the genotype. But I now consider it to be more likely that a rule of Nomenclature as yet unborn lies concealed in those sentences, a rule to the effect that, if an author proposes a new genus for a number of species the oldest described species becomes ipso facto the genotype. This would be a sister-rule to the one (not accepted) which postulates that the oldest (i.e. first described) genus of a family is the type-genus, and would also agree with the provision of the International Code that the first described subspecies is typical for the species. A logical, mechanical sequence. The mechanization of Nomenclature, however, would lead to its destruction, as mechanization does in other branches of life. Whatever may have been the process of his reasoning, we are faced by the fact that Mr. W. D. Pierce uses the qualifications *definitely* and *obvious*. The treatment of *Anthrribus* by Geoffroy must decide whether there is in it something "definite" which leads to an "obvious" conclusion. But before looking at Geoffroy's text, let us be clear on this point that the enquiry has the object of ascertaining which of the 7 species placed by Geoffroy under *Anthrribus* is the genotype. A condensation of Mr. W. D. Pierce's statement would essentially be as follows: "As Linnaeus quotes in 1767 *Anthrribus* 4 Geoffroy as a synonym of *Silpha pulicaria*, this species 4 of Geoffroy 'obviously' becomes the type of *Anthrribus*." Would it not have been more "obvious" to conclude that species 4 was no longer available as type because Linnaeus had taken it out of *Anthrribus* and placed it in *Silpha*, leaving the 6 other species untouched in *Anthrribus*? However, the action of Linnaeus is not really relevant, because Linnaeus did not deal with *Anthrribus* as a genus. That "Bladh (1769) cites *Anthrribus* as equal to *Silpha*" is likewise irrelevant; moreover, the statement is not correct, as Mr. W. D. Pierce will see if he looks again at p. 154 of *Amoen.* vii, where a list of "*Synonyma novorum generum Auctorum*" and a list of "*Auctorum nova genera*" are given, *Anthrribus* being in the latter series. No authors are mentioned in these lists; but as Bladh refers to Geoffroy (as he spells the name) on pp. 134 and 135, we may assume that he took the name *Anthrribus* from Geoffroy's *Hist. Abr.* 1762.

In consulting the *Histoire Abrégée*, we find that in the table of classification facing p. 59 the name is spelt without *h* as by Bladh: *Antrribus*, in conformity with the spelling of the French version *antribe*. We may look upon it as a slip of the pen. No derivation of the name is given; but as Geoffroy says on p. 306 that he has called these beetles *anthrribus* because they gnaw flowers to bits, his name *Anthrribus* may be an error for *Anthotribus*, as other authors have explained.¹ I accept *Anthrribus* as a legitimate contraction.

On pp. 306-309 Geoffroy gives descriptions of *Anthrribus* and of 7 species,

¹ Illiger suggests another derivation of *Antrribus* in *Magaz.* i, p. 127, and says that, if his suggestion was right, the name ought to be *Antrriptus*.

to none of which latter he applies a specific name, dealing with them in this way :

1. ANTHRIBUS ovatus, niger, elytris striatis, rubro nigroque marmoratis. Then follow the French name (L'antribe marbré), the dimensions and a fairly explicit description.

Species No. 1 and No. 3 are figured on pl. V, with enlargements of the antennae and one leg and, in the case of No. 1, of a tarsus. On p. xviii of the introductory *Discours Préliminaire* Geoffroy says that, for the better understanding of the work, he has added to the descriptions the figure of an insect of each genus (rarely two or three), accompanied by the parts which constitute the character (i.e. of the genus). It is therefore obvious that a subsequent author who accepted *Anthribus* Geoffroy as valid was bound to select the genotype in accordance with this definite statement by Geoffroy. The shape of the tarsus being one of the principal distinctions given by Geoffroy, species No. 1, of which the tarsus is figured, is obviously the one to be selected, and I select it herewith. However, Mr. W. D. Pierce prefers No. 4, because there is under No. 4 a reference to a Linnaean species. As said above, the existence of that reference is not relevant. Moreover, the Linnaean species, even if it may have turned out later on to be the same as Geoffroy's No. 4, cannot be made the type of *Anthribus* Geoffroy ; for Geoffroy's French text accompanying the differentia and literature, apparently not consulted by Mr. W. D. Pierce, reads as follows :

“ 4. ANTHRIBUS niger, elytris abdomine brevioribus.

Linn. faun. suec. n. 370. Dermestes niger oblongus, abdomine acuto.

Act. Ups. 1736, p. 16, n. 7. Scarabaeus minimus ater, florilegus.

Raj. ins. p. 108, n. 29. Scarabaeus antennis clavatis, clavis in annulos divisus.

L'antribe des fleurs.

Longueur 1 ligne. Largeur ½ ligne.

“ Cette petite espèce (thus spelt by Geoffroy) est noire partout. Sa forme est ovale, un peu carrée. Ce qui la rend très-aisée à reconnoître, c'est que ses étuis sont plus courts que son ventre, & n'en recouvrent que les deux tiers ; mais le bout de son ventre n'est pas en pointe, comme le dit M. Linnaeus, ce qui me feroit presque douter que ce fût cette espèce qu'il eût voulu désigner. On trouve ce petit animal en très-grande quantité sur les fleurs, sur-tout sur les plantes en ombelles.”

Geoffroy expressing a doubt as to the identity of No. 4 with Linnaeus's insect, this species is a *species inquirenda* and according to the Rules not available for selection as genotype.

Is there a definite valid type-designation for *Anthribus* Geoffroy after 1762 ?

Müller 1764 mentions the name *Anthribus*, but gives no species. De Geer 1775 describes one species, which is not among the original seven. Müller 1776 mentions one species, which is not one of Geoffroy's. Fourcroy, *Ent. Paris*. 1785, is essentially the same as Geoffroy 1762, except that the species bear nomina trivialia and that some species are added.

Schaeffer 1766, Sulzer 1774, Fuessly 1775 and Goeze 1777 refer to a species (or a composite species) under *Anthribus* or under *Silpha*. None of these authors are relevant ; they did not select a genotype.

In 1771 Forster published in London a booklet entitled *Novae Species INSECTORUM. Centuria I.* Mr. W. D. Pierce erroneously says of this work that "Forster follows Geoffroy, but adds two new species, *fasciatus* and *nebulosus*, neither of which can be made type of *Anthribus*, as they were not originally included."

The facts are these: Forster refers ANTHRIBUS to Geoffroy, but gives a diagnosis of his own and adds a footnote on p. 10 to the effect that he separates *Anthribus* from *Dermestes* on account of the plainly different antennae and the singular shape of the body; *Dermestes* being a highly intricate genus, he considers it best to remove from it this special genus *Anthribus*. He describes two species, as stated by Mr. W. D. Pierce. The trivial names of these species are new, but not the species. Under the first, *A. fasciatus*, we find the correct reference to *Geoffr. ins.* i. p. 306, t. 5. f. 3. Forster's second species, *Anthribus nebulosus*, is Geoffroy's No. 2, but is not referred by him to Geoffroy. If Geoffroy 1762 is set aside as non-binominal (or anti-binominal), Forster's *Anthribus* with *A. fasciatus* as type (reference to a figure) will take its place. The common-sense genotype being the same in both cases, this solution is satisfactory. However, for those who accept Geoffroy 1762 as available under the Rules, the matter is not closed with Forster 1771.

Anthribus Olivier 1789 is a mixture of Nitidulids and Rhynchophora, all three Rhynchophora of Geoffroy 1762 being there, and does not bear on the question of type-fixation. In 1790 Fabricius described *Anthribus* without referring the generic name to Geoffroy. He includes four species, of which one is Geoffroy's No. 3. As Fabricius does not select a type and does not say anything about the other six species of Geoffroy's *Anthribus*, the description of the genus, moreover, being new and not taken from Geoffroy, the matter remains as before.

Fabricius 1792 (*Ent. Syst.* i. 2, p. 375) definitely restricts his *Anthribus* to the Rhynchophora; the three Rhynchophora of Geoffroy 1762 are here as *A. latirostris*, *A. scabrosus* and *A. varius*, and several other species are added. Fabricius does not mention Forster, who has priority. It is this publication of Fabricius which settled the meaning of *Anthribus* for his generation and the next. However, since he did not fix a genotype—an idea which was as yet unborn—, our generation does not consider Fabricius's restriction of the name to Rhynchophora as having any bearing on the nomenclatorial point in question. The Code demands a selection of the genotype, rigorously construed.

Hellwig 1792 (in Schneider, *Neuestes Mag. Liebh. Entom.* p. 393) is not satisfied with Fabricius retaining the name *Anthribus*; he says:

"4. PLATYSTOMOS.

"*Curc. Albinus, latirostris* und Consorten waren mir unter den Cureulionen schon lange anstössig, und ich trennte sie von ihnen unter dem oben angeführten von *πλατυς* (breit) und *στομα* (der Mund) hergeleiteten Namen. Herr Prof. *Fabricius* war von der Notwendigkeit dieser Trennung durch die Anatomie der Fresswerkzeuge auch überzeugt, legte ihnen aber den schon von *Geoffroi* gebrauchten Gattungsnamen *Anthribus* bey, der mir jedoch aus dem Grunde nicht gefiel, weil *Geoffroi* unter diesem Namen noch andere Käfer vereinigt hatte, die gar nicht dahin gehören."

This *Platystomos* Hellwig 1792 accordingly is another name for what Fabricius

preferred to call *Anthribus*. Neither the type of *Platystomos* nor that of *Anthribus* is fixed by Hellwig (spelled Helwig by Fabricius). Among the species of *Anthribus* of Fabricius 1792 there is one which belongs to another family (*A. planirostris*). This species is removed by Herbst 1797 into the new genus *Makrostoma*, so that now for the first time *Anthribus* contains nothing but the then known Anthribids (in the sense of Forster, Schoenherr, etc.). But, again, Herbst does not select a genotype.

Fabricius 1801 (*Syst. Eleuth.*) has no genotype; species of *Makrostoma* = *Rhinosimus* are still included.

Walckenaer 1802 (*Fauna Paris*, i. p. 231) restricts *Anthribus* to the rhynechorous species of Geoffroy and adds one species. No genotype is selected.

Latreille 1804 (*Hist. Nat. Crust. Ins.* xi. p. 32), referring to "Anthrîbe; *anthribus*" of Geoffroy, says: "Cet illustre entomologiste, n'ayant égard qu'à la réunion de quelques caractères, a placé dans ce genre plusieurs insectes qui ne lui appartiennent certainement pas, comme les espèces 4 à 7 inclusivement. Mais quels sont donc les insectes auxquels nous devons conserver le nom d'*anthrîbe*? Il est naturel de prendre ceux qui sont figurés pour types. Or, les deux anthribes représentés par Geoffroy sont du genre qui porte ce nom dans Schaeffer, dans Fabricius; c'est pour cela que nous nous sommes vus forcés de rejeter la dénomination de *macrocéphale*. . . Olivier nomme *anthrîbe* les espèces 4, 5, 6 de Geoffroy; ils seront pour nous des phalacres."

Here, as far as I know, the word type in the nomenclatorial sense appears for the first time in taxonomic Entomology. As two species (Nos. 1 and 3 of Geoffroy) are involved, this type designation does not absolutely satisfy the strict Rule of the Code.

Latreille 1807 (*Gen. Crust. Ins.* ii. p. 237) does not contain anything helpful.

Latreille 1810 (*Cons. Gén.* pp. 421-444) indicates under the genera a species "qui leur sert de type." According to Opinion 11 of the Commission on Zoological Nomenclature "the 'Table des genres' should be accepted as designation of types of the genera in question." The Opinion being expressed in the conditional, we must interpret it as meaning that the type-fixation in that table also is conditional. In most instances Latreille gives as an example only one species; in many cases two or more species. For instance, under *Nymphalis* he gives *Dido*, *aceris*, *populi*, *Achilles*; under *Satyrus* the string of types consists of *Teucer*, *Phidippus*, *Sophorae*, *Piera*, *Galathaea*, *Mæra*; under *Arctia* we find *salicis*, *russula*, *purpurea*, *caja*, etc.; *Limonia* contains "les tipules de Fab.: *picta*, *sex-punctata*, *erioptera*, etc.;" under *Hydroporus* (p. 415) we find "*D. planus*, *rufifrons*, *lituratus*, *trifidus*, *confluens*, etc." In these and numerous other cases no species is specified as TYPE. Therefore Opinion 11 is applicable at most to those genera of the Table des Genres under which only one species is mentioned.

Under *Anthribus* one example is given: *A. latirostris* of Fabricius, which is one of the two species figured by Geoffroy 1762. The *Anthribus* of Latreille is the *Anthribus* of Fabricius; *Platystomos* Hellwig 1792 being another name for *Anthribus* Fabricius, its genotype is ipso facto the same as that of *Anthribus* Fabricius. Mr. W. D. Pierce, following Bedel, and the (rejected) first species rule, accepts *Curculio albinus* L. as type of *Platystomos*, contrary to Article 30, f., of the Rules.

Schoenherr 1823 makes *Curculio albinus* L. type of *Anthribus*, a species

neither included in anti-binominal Geoffroy 1762, nor in binominal Forster 1771. Schoenherr based his nomenclature on Fabricius, which explains his selection of *albinus* as genotype.

On p. 3 of his paper, Mr. W. Dwight Pierce repeats the assertion that Geoffroy's spec. 4 is *pulicarius* of Linnaeus and is the only one available for type, and, referring to Latreille's designation of *latirostris* as type of *Anthribus*, expresses the opinion that it is impossible to accept this interpretation of Latreille's, because "the name *Anthribus* has been correctly used otherwise by Geoffroy (1762), Forster (1771), De Geer (1775), Müller (1776)." The last two authors are not relevant, because they mention only one species, and this is not among Geoffroy's seven; Forster under *Anthribus* describes two of Geoffroy's rhynephorous species, his action being just the opposite from what Mr. Pierce's remark implies.

SUMMARY.

(1) The change of names introduced by Mr. W. Dwight Pierce is unnecessary. The evidence upon which he bases his conclusion is incomplete and partly erroneous, and his argumentation is contrary to the International Rules of Zoological Nomenclature.

(2) If the generic names of Geoffroy are accepted as from 1762, the first action which can be construed as selection of genotype is that of Latreille 1810, who, after having restricted the name in 1804 to the two species figured by Geoffroy, selects one of these two as an example of an *Anthribus*, the selected species being *A. latirostris* Fab. (=Geoffroy No. 3).—In this case *Platystomos* Hellwig 1792, as another name for *Anthribus* Fabricius, and *Platyrhinus* Clairville 1798, as having the same genotype (selected by Schoenherr in 1823), would be synonyms of *Anthribus*.

(3) If Geoffroy 1762 is rejected as being anti-binominal, we have *Anthribus* Forster 1771, which has priority over *Anthribus* Fabricius 1790, and *A. fasciatus* Forster 1771 must be accepted as genotype, being of the two species the one of which there existed a figure, to which Forster refers.—In this case *Platystomos* Hellwig 1792 takes the place of *Anthribus* Fabricius 1790, with *A. latirostris* Fab. as genotype, *Platyrhinus* Clairville 1798, also with *latirostris* as type, becoming a synonym of *Platystomos*.

(4) The common-sense solution would be to agree on *A. fasciatus* Forster 1771 (=Geoffroy No. 1) as genotype of *Anthribus* Geoffroy and of *Anthribus* Forster, and to reject Latreille's action of 1810 as not being a strict type-selection.—In this case *Platyrhinus* with *latirostris* (= *resinosus* Scop., which has priority) as genotype and *Platystomos* with *albinus* as genotype could be employed. Incidentally, this nomenclature would be in conformity with that in the Catalogue of Gemminger and Harold, except that in this Catalogue the pre-occupied name *Macrocephalus* is used and *Platystomos* (spelt *Platystomus*) placed as a synonym of it.

Whatever solution is preferred, the name *Anthribus* remains valid in the rhynephorous family ANTHRIBIDAE.